



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/416,961	10/13/1999	SHIGEKAZU INOHARA	520.37728X00	6821
20457	7590	10/28/2003	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-9889			LEROUX, ETIENNE PIERRE	
		ART UNIT	PAPER NUMBER	
		2171		

DATE MAILED: 10/28/2003

5

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/416,961	INOHARA ET AL.
	Examiner Etienne P LeRoux	Art Unit 2171

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on \_\_\_\_\_.

2a) This action is FINAL.      2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-35 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5) Claim(s) \_\_\_\_\_ is/are allowed.

6) Claim(s) 1-35 is/are rejected.

7) Claim(s) \_\_\_\_\_ is/are objected to.

8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 13 October 1999 is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.

12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some \* c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) The translation of the foreign language provisional application has been received.

15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948) *2*

3) Information Disclosure Statement(s) (PTO-1449) Paper No(s) *5*

4) Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_

5) Notice of Informal Patent Application (PTO-152)

6) Other: \_\_\_\_\_

***Claim Objection***

1. Claims 15–17 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, claims 15 – 17 have not been further treated on the merits.

***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1, 2, 4-7, 9, 11, 15, 18-21, 23-25, 27-29 and 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites “one or more [ … ] first computers” and a “second computer different from the first computer.” It is difficult to discern why a plurality of computers are classified as first computers. Furthermore, the difference between the plurality of first computers and the second computer is not clear.

Claim 1 recites “storage medium (secondary storage).” The difference between storage medium and secondary storage is not clear. Furthermore, the primary storage is not apparent.

Claim 2 is rejected for being dependent from a rejected base claim.

Claim 15 recites “said object access module obtains from the object description data.” There is insufficient antecedent basis for this limitation in the claim(s).

Claim 1 recites “providing said secondary storage apparatus with storage medium (secondary storage) that can save data.” The parenthetical statement (secondary storage) is

unclear. If it is not ignored and included in the claim limitation, above claim limitation would read "providing said secondary storage apparatus with storage medium secondary storage that can save data." Above is difficult to discern.

Furthermore, claim 1 includes the parenthetical expression (blocks), (objects), (object access module). Claim 3 includes (blocks), (object), (object access module). There are multiple instances of similar parenthetical expressions in the claims that follow, i.e., claims 4-7, 9, 11, 18-21, 23-25, 27-29 and 32-35. Correction is requested.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-9 and 18-35 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat No 5,680,570 issued to Rantala et al (hereafter Rantala '570).

#### **Claims 1 and 3:**

Rantala '570 discloses:

- executing one or more application programs on said first computer [Fig 1, item 18],
- providing said secondary storage apparatus with storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, said secondary storage including a plurality of storage units (blocks) for storing one or more of application data (object) used by

said application programs, said secondary storage apparatus providing said first computer with block-based I/O function and object-based I/O function [Fig 2, 20 and col 3, lines 52-62]

- receiving a program module (object access module) that implements the object-based I/O function by using the block-based I/O function from the first computer or a second computer different from the first computer [Fig 1, item 18 and col 3, lines 42-45] and
- receiving object-based I/O request for said object from said first computer to perform object-based I/O of the request by executing said object access module [col 3, lines 40-45]
- registering or deleting to/from said secondary storage apparatus a program module (object access module) that implements object-based I/O function by using block-based I/O function [col 4, lines 12-27]

Claims 2, 4 and 6:

Examiner maintains said object access module obtains the data value or location of data in the block corresponding to a specification is inherent in the teaching of Rantala '570. A specification is used to determine the basic design of data structures [Fig 2, 30]

Claim 5:

Rantala '570 discloses:

- executing one or more application programs on said first computer [Fig 1, item 18],
- providing said secondary storage apparatus with storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, said secondary storage including a plurality of storage units (blocks) for storing one or more of application data (object) used by said application programs, said secondary storage apparatus providing said first computer with block-based I/O function and object-based I/O function [Fig 2, 20 and col 3, lines 52-62]

- said object access module implementing object-based I/O function using block-based I/O function [col 3, lines 40-45]
- said object access module sent from said first computer or a second computer different from said first computer to said secondary storage apparatus to execute therein [[Fig 1, item 18 and col 3, lines 42-45]

Claim 7:

Rantala '570 discloses:

- executing one or more application programs on said first computer [Fig 1, item 18],
- providing said secondary storage apparatus with storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, said secondary storage including a plurality of storage units (blocks) for storing one or more of application data (object) used by said application programs, said secondary storage apparatus providing said first computer with block-based I/O function and object-based I/O function [Fig 2, 20 and col 3, lines 52-62]
- providing for said first computer block-based I/O function and object-based I/O function from said secondary storage [Fig 1, item 18 and col 3, lines 42-45]
- receiving from either the first computer or a second computer different from the first computer data indicating how said object is stored o said secondary storage (object description data) [col 3, lines 40-45]
- receiving a request of object-based I/O on said object from said first computer to perform I/O of said request by identifying the location of said object on said secondary storage by using said object description data [col 4, lines 28-48]

Claim 8:-

Rantala '570 discloses said object description data is data for specifying attribute or inter-block reference based on the offset and size thereof [col 5, line 64 through col 6, line 1]

Claim 9:

Rantala '570 discloses wherein said object description data is data for specifying attribute or inter-block reference by a lexical analyzing program (parser) or a parser generating grammar [col 5, lines 49-63 and Fig 4]

Claim 18:

Rantala '570 discloses:

- executing one or more of application programs on said first computer [Fig 1, item 18];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, said secondary storage including a plurality of storage units (blocks);
- storing one or more of application data (object) used by said application programs on said secondary storage;
- said secondary storage being a secondary storage of a computer system for providing block-based I/O function and 1/0 function for application programs to said first computer [Fig 2, item 20 and col 3, lines 52-62],
- said secondary storage maintaining object access modules for implementing object-based 1/0 function by using block-based I/O function [col 3, lines 40-45],
- said secondary storage receiving a module for implementing said advanced 1/0 function by using said object access module (function module) from said first computer or a second computer different from said first computer [col 3, lines 40-45],

- then said secondary storage receiving a request for said advanced from said first computer to perform I/O of said request by executing said function module [Fig 1, item 18 and col 3, lines 42-45].

Claim 19:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, item 18];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62]
- said secondary storage apparatus operating as said first computer or said second computer different from said first computer running within a computer system for providing to said first computer a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1, item 18 and col 3, lines 42-45];
- said secondary storage apparatus storing a module that implements object-based I/O function by using block-based I/O function (object access module) [Fig 2 and col 3, lines 50-60];
- said computer registering to or deleting from said secondary storage a module that implements said advanced I/O by using said object access module (function module) [col 4, lines 28-48].

Claim 20:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, item 18]

- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62];
- said secondary storage apparatus providing said first computer with a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1, item 18 and col 3, lines 42-45];
- said program module being sent from said first computer or a second computer different from said first computer to said secondary storage apparatus to be executed on said secondary storage apparatus [Fig 1, item 18 and col 3, lines 42-45];
- said program module providing said advanced I/O by using a module (object access module) that implements object-based I/O function by using block-based I/O function [col 4, lines 28-48].

Claim 21:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, item 18]
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62];
- said secondary storage apparatus providing to said first computer a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1, 18 and col 3, lines 42-45];

- said secondary storage apparatus maintaining a module that implements object-based I/O function by using block-based I/O function (object access module), as well as a module that implements said advanced I/O by using said object access module (function module) [Fig 2, and col 3, lines 50-60];
- said protection module determining a method invocation to be allowed or denied when said function module attempts to invoke a method in the object access module [col 4, lines 12-27].

Claim 22:

Rantala '570 discloses wherein said protection module is registered to or deleted from said secondary storage apparatus by said first computer or a second computer different from said first computer running within said computer system [col 4, lines 41-49]

Claim 23:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, item 18];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62];
- said secondary storage apparatus providing said first computer with a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1, item 18 and col 3, lines 42-45];
- said secondary storage apparatus maintaining an object access module that implements object-based I/O function by using block-based I/O function, as well as a module that

implements said advanced I/O by using said object access module (function module) [[Fig 2, and col 3, lines 50-60];

- said module (protection module) for determining whether a method invocation is allowed or denied when said function module attempts to invoke a method in the object access module being received from said first computer or a second computer different from said first computer [col 4, lines 12-27].

Claim 24:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, 18];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62];
- said secondary storage apparatus operating as said first computer or said second computer different from said first computer running within a computer system for providing to said first computer a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1, item 18 and col 3, lines 42-45];
- said secondary storage apparatus storing an object access module that implements object-based I/O function by using block-based I/O function, as well as a module that implements said advanced I/O by using said object access module (function module) [Fig 2, and col 3, lines 50-60];

- said computer registering to or deleting from said secondary storage apparatus said protection module for determining a method invocation to be allowed or denied when said function module attempts to invoke a method in the object access module [col 4, lines 28-48].

Claim 25:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, item 18];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62]
- said secondary storage apparatus providing said first computer with a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1. item 18 and col 3, lines 42-45];
- said secondary storage apparatus storing an object access module that implements object-based I/O function by using block-based I/O function; when said object access module provides external devices [Fig 2, and col 3, lines 50-60]
- a plurality of objects having containment, said locking module providing external devices with mutual exclusion function with the containment of said a plurality of objects being taken into consideration [col 4, lines 20-28].

Claim 26:

Rantala '570 discloses said locking module is registered to or deleted from said secondary storage apparatus by said first computer [Fig 1, 18] or a second computer different from said first computer [Fig 1, 12a, 12b, 12c, 12d].

Claim 27:

Rantala '570 discloses:

- executing on said first computer one or more of application programs [Fig 1, item 18];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object)used by said application programs [Fig 2, item 20 and col 3, lines 52-62];
- providing from said secondary storage apparatus to said first computer with a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 1, item 18 and col 3, lines 42-45];
- maintaining on said secondary storage apparatus an object access module that implements object-based I/O function by using block-based I/O function [Fig 2 and col 3, lines 50-60];
- receiving locking module from said first computer or a second computer different from said first computer; when said object access module provides external devices a plurality of objects having containment, said locking module for providing external devices with mutual exclusion function with the containment of said a plurality of objects being taken into consideration [col 4, lines 20-28].

Claim 28:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, item 18]
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62];
- said secondary storage apparatus operating as said first computer or said second computer different from said first computer running within a computer system for providing to said first computer a block-based 1,/0 function and an I/O function for said application programs (advanced 1/0) [Fig 1, item 18 and col 3, lines 42-45];
- said secondary storage apparatus storing an object access module that implements object-based I/O function by using block-based I/O function [Fig 2 and col 3, lines 50-60];
- when said object access module provides external devices a plurality of objects having containment, said computer registering to or deleting from said secondary storage apparatus said locking module for providing external devices with mutual exclusion function with the containment of said plural objects being taken into consideration [col 4, lines 20-28]

Claim 29:

Rantala '570 discloses:

- said second computer storing the list of said secondary storage apparatus [col 3, lines 35-45];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks); said secondary storage apparatus provides said first computer with block-based 1/0 function and 1/0 function for said

application programs (advanced I/O) or object-based I/O function [Fig 2, item 20 and col 3, lines 52-62]; said

- first computer sending to said second computer a protection module (module) that implements said advanced I/O; said second computer receiving said module to send it to part or all of said secondary storage apparatus listed on the list [col 4, lines 20-28];
- said secondary storage apparatus receiving said module; said first computer transmitting to said secondary storage apparatus a request of said advanced I/O [col 4, lines 20-28];
- said secondary storage apparatus invoking said module to perform said advanced I/O [col 4, lines 20-28].

Claim 30:

Examiner maintains that said management computer provides a compiler for compiling said protection module for said secondary storage apparatus to compile said module received from said first computer using said compiler in order to send a compiled module to part or all of said secondary storage apparatus is inherent in the teachings of Rantala '570.

Claim 31:

Examiner maintains that said management computer storing model data of said secondary storage apparatus, provides one or more compilers for compiling modules for each model of said secondary storage apparatus, to compile said module received from said first computer using said one or more compilers for the destination secondary storage apparatus, to send a compiled module to part or all of said secondary storage apparatus is inherent in the teachings of Rantala '570.

Claim 32:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, 12b]

- said second computer storing the list of said secondary storage apparatus [col 3, lines 35-45]
- said secondary storage apparatus including storage medium 25 (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks); said secondary storage apparatus provides said first computer with block-based 1/0 function and 1/0 function for said application programs (advanced 1/0) or object-based 1/O function [Fig 2, item 20 and col 3, lines 52-62] ;
- said first computer sending to said second computer a protection module (module) that implements said advanced 1/0 [col 4, lines 20-28];
- said second computer receiving said module to send it to part or all of said secondary storage apparatus listed on the list [col 4, lines 20-28]
- said secondary storage apparatus receiving said module [col 4, lines 20-28];
- said first computer transmitting to said secondary storage apparatus a request of said advanced 1/0 [col 4, lines 11-19];  
said secondary storage apparatus invoking said module to perform said advanced 1/0 [col 4, lines 11-19]

Claim 33:

Rantala '570 discloses:

- executing on said first computer one or more of application programs [Fig 1, 12b];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and

- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs; [Fig 2, item 20 and col 3, lines 52-62]
- providing from said secondary storage apparatus to said first computer with a block-based I/O function and an I/O function for said application programs (advanced I/O) or object-based I/O function [col 3, lines 52-62];
- receiving a protection module (object access module) that implements said object-based I/O function or said advanced I/O by using block-based I/O function from said first computer or a second computer different from said first computer [col 4, lines 20-28];
- providing said secondary storage apparatus with a compiler for compiling said module into an executable for faster execution [inherent in the teachings of Rantala '570]
- compiling said module using said compiler on said secondary storage apparatus [inherent in the teachings of Rantala '570],
- receiving a request of object-based I/O or advanced I/O on said object from said first computer; and performing I/O of said request by executing said compiled module [col 4, lines 12-19].

Claim 34:

Rantala '570 discloses:

- executing on said first computer one or more of application programs [Fig 1, 12b];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62];

- providing from said secondary storage apparatus to said first computer with a block-based I/O function and an I/O function for said application programs (advanced I/O) [Fig 2 and col 3, lines 47-62];
- for said advanced I/O function, providing a feature of replying, in response to a request from said first computer [Fig 2 and col 3, lines 47-62],
- a correspondence between a plurality of part of one object and secondary storage apparatus for storing said part of object [col 3, lines 53-63].

Claim 35:

Rantala '570 discloses:

- said first computer executing one or more of application programs [Fig 1, 12a];
- said secondary storage apparatus including storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, and
- said secondary storage including a plurality of storage units (blocks), said secondary storage storing in one or more of blocks one or more of application data (object) used by said application programs [Fig 2, item 20 and col 3, lines 52-62]
- means for providing said first computer block-based I/O function and object-based I/O function [col 3, lines 40-45];
- means for receiving a program module (object access module) that implements object-based I/O function by using block-based I/O function from said first computer or a second computer different from said first computer [col 3, lines 40-45];
- means for receiving said object access module and for receiving a request of object-based I/O on said object access module from said first computer [Fig 2, and col 3, lines 50-60]; and
- means for executing said object access module [inherent in the teachings of Rantala '570].

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 10, 11, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rantala '570 in view of US Pat 5,640,556 issued to Tamura (hereafter Tamura '556).

**Claim 10:**

Rantala '570 discloses the elements of claim 7 as noted above.

Rantala '570 fails to disclose wherein said object description data is data for specifying the file format of said object based on whether the data stored in a specific part of one or more blocks contains some specific value or pattern

Tamura '556 discloses wherein said object description data is data for specifying the file format of said object based on whether the data stored in a specific part of one or more blocks contains some specific value or pattern [col 6, lines 5-18 and Fig 9].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rantala '570 to include wherein said object description data is data for specifying the file format of said object based on whether the data stored in a specific part of one or more blocks contains some specific value or pattern as taught by Tamura '556.

The ordinarily skilled artisan would have been motivated to modify Rantala '570 per that above for the purpose of transferring data between two or client computers [col 6, lines 6-11].

**Claim 11:**

Rantala '570 discloses:

- executing one or more application programs on said first computer [Fig 1, item 18],
- providing said secondary storage apparatus with storage medium (secondary storage) [Fig 2, item 24] that can save data after shutting down of power source, said secondary storage including a plurality of storage units (blocks) for storing one or more of application data (object) used by said application programs, said secondary storage apparatus providing said first computer with block-based I/O function and object-based I/O function [Fig 2, 20 and col 3, lines 52-62]
- said secondary storage providing block-based I/O function and object-based I/O function [col 3, lines 40-45]

Rantala '570 fails to disclose said computer registering to or deleting from said secondary storage apparatus data indicating how said object is stored on said secondary storage (object description data).

Tamura '556 discloses said computer registering to or deleting from said secondary storage apparatus data indicating how said object is stored on said secondary storage (object description data) [col 6, lines 5-18 and Fig 9]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rantala '570 to include said computer registering to or deleting from said secondary storage apparatus data indicating how said object is stored on said secondary storage (object description data) as taught by Tamura '556.

The ordinarily skilled artisan would have been motivated to modify Rantala '570 per the above for the purpose of transferring data between two or more client computers [col 6, lines 6-11].

Claim 13:

Rantala '570 discloses said object description data is data for specifying attribute or inter-block reference based on the offset and size thereof [col 5, line 64 through col 6, line 1]

Claim 14:

Tamura '556 discloses wherein said object description data is data for specifying the file format of said object based on whether the data stored in a specific part of one or more blocks contains some specific value or pattern [col 6, lines 5-18 and Fig 9].

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Rantala '570 and Tamura '556 and further in view of US Pat No 5,386,578 issued to Lin (hereafter Lin '578).

Claim 12:

The combination of Rantala '570 and Tamura '556 discloses the elements of claim 11 as noted above.

The combination of Rantala '570 and Tamura '556 fails to disclose said object description data is data for specifying the data sequence or inter-block reference of data in a block based on the offset and size thereof.

Lin '578 discloses said object description data is data for specifying the data sequence or inter-block reference of data in a block based on the offset and size thereof [col 1, lines 10-25].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the combination of Rantala '570 and Tamura '556 to include said object description data is data for specifying the data sequence or inter-block reference of data in a block based on the offset and size thereof as taught by Lin '578.

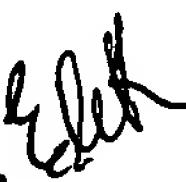
The ordinarily skilled artisan would have been motivated to modify the combination of Rantala '570 and Tamura '556 per the above for the purpose of transferring data from an external file to an internal data file structure.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Etienne LeRoux whose telephone number is (703) 305-0620. The examiner can normally be reached on Monday – Friday from 8:00 AM to 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Safet Metjahic, can be reached on (703) 308-1436.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

Etienne LeRoux  
  
October 20, 2003

  
Safet Metjahic  
AV2171